/	OIPE JO
B	MAS 0 7 2005
B	ST BADE INC.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number 10/815,061

Filing Date March 31, 2004

First Named Inventor Surajit Chaudhuri

Group Art Unit 2171

Examiner Name N/A

Attorney Docket Number 301552.01

Sent via Express Mail Label No.:	Attorney Docket Number		301552.01		
ENCLOSURES (check all that apply)					
Fee Transmittal Form Fee Attached Amendment / Reply After Final Affidavits/declaration(s) Extension of Time Request Express Abandonment Request Information Disclosure Statement with Form PTO/SB/08A (3 pages) Response to Notice to File Missing Parts A copy of the Notice to File Missing Parts Under 37 CFR 1.52 or 1.5 CERTIFICATE OF MAILING OR TRANSMISSION (Under 37 CFR § 1.8(a)) I hereby certify that this correspondence is being: Adeposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450; or Transmitted by facsimile on the date shown below to the USPTO at (703) March 4, 2005 Date Paul Hevnssene Printed Name	Drawin Drawin Declara New A cc (37 cm) Licensia Petition Applica General 37 cm Termina Request CD, Nu	ation All y Executed (pages) Apply from a prior application CFR 1.63(d)) (pages) And the Convert to a Provisional Ation A Power of Attorney (SB80) CFR 3.73(b) Statement All Disclaimer Attorney for Refund Attorney for Refund Attorney for Refund The Commissioner is he	ereby	Appeals and Interferences Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) Proprietary Information Status Letter Application Data Sheet Request for Corrected Filing Receipt Return Receipt Postcard Other Enclosure(s) (please identify below): A Cited References in Computer enable Format Clay authorized to charge any additional payments, to Deposit Account No. 50-	
SIGNATURE OF ATTORNEY OR AGENT					
Name of Attorney or Agent		No. 47,648 Heynssens			
Date March 4, 2005		(425) 707-3913	Fa	acsimile No. (425) 708-5046	
Assignee Name:	I •	MICROSOFT CORPO ONE MICROSOFT WA REDMOND, WA 9805	۱Y	TION	
Customer Number:	I:	22971			





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Surajit Chaudhuri

Attorney Docket No.: 301552.01

Application No.: 10/815,061

Group Art Unit: 2171

Filed: 03/31/2004

Examiner: N/A

Customer No.:

22971

Confirmation Number: 7927

Title: PRIMITIVES FOR WORKLOAD SUMMARIZATION

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450

STATEMENT FILED PURSUANT TO THE DUTY OF DISCLOSURE UNDER 37 C.F.R. §§ 1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. § 1.97

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case. No fee is required.

PART II: Remarks

The Applicant hereby makes of record in the above-identified application the information listed on the attached forms PTO/SB/08A and 08B. The order of presentation of the references should not be construed as an indication of the importance of the references. Documents cited on the attached forms PTO/SB/08A and 08B are enclosed unless otherwise indicated. It is respectfully requested that:

- 1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims:
- 2. The enclosed form PTO/SB/08A and 08B be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
- 3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. § 102.

Notwithstanding any statement by the Applicant, the Applicant urges the Examiner to form his own conclusion regarding the relevance of the cited information. An early and favorable action is hereby requested.

> Respectfully submitted, Microsoft Corporation, Applicant

Paul Heynssens, Rog. No.

Microsoft Corporation Redmond,

Washington

Telephone (425) 707-3913

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)]

I hereby certify that this correspondence is being:

deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-

1450

Date

Signature

Paul Heynssens

Type or Print Name



4

Substitute for form 1449/PTO

Sheet

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

•	,	 -	•

Title Of Invention	Primitives for Workload
	Summarization
Application Number	10/815,061
Filing Date	03/31/2004
First Named Inventor	Surajit Chaudhuri
Art Unit	2171
Examiner Name	N/A
Attorney Docket Number	301552.01

	U.S. PATENT DOCUMENTS						
Examiner	Cite	U.S. Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where		
Initials*	No.1	Number - Kind Code² (if known)	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear		
	Α	US-					

	FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.¹	Foreign Patent Document Kind Code ⁵ Country Code ³ Number ⁴ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T6	
	В						

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.)., date, page(s), volume-issue number(s), publisher, city and/or country where published.			
	С	Aboulnaga, A. and Chaudhuri, S. <i>Self-Tuning Histograms: Building Histograms Without Looking at Data.</i> Proceedings of ACM SIGMOD, Philadelphia, 1999.			
	D	Acharya S., Gibbons P.B., and Poosala V. <i>Congressional Samples for Approximate Answering of Group-By Queries</i> . Proceedings of ACM SIGMOD, 2000.			
	E	Agrawal, S., Chaudhuri, S., and Narasayya, V. <i>Automated Selection of Materialized Views and Indexes for SQL Databases</i> . Proceedings of VLDB 2000.			

Examiner	Date
Signature	Considered

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this formwith next communication to applicant.

Information Disclosure Statement—PTO/SB/08a&b

Matter No.: 301552.01

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (MPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under MPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITALLETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.)., date, page(s), volume-issue number(s), publisher, city and/or country where published.	Τz
	F	Agrawal S., Chaudhuri S,, Kollar L., and Narasayya V. <i>Index Tuning</i>	
		Wizard for Microsoft SQL Server 2000. White paper.	
·		http://msdn.microsoft.com/library/techart/itwforsql.htm	
	G	Borzsonyi S, Stocker K., Kossmann D. <i>The Skyline Operator</i> .	
		Proceedings of ICDE 2001.	
	Н	Calzarossa M., and Serazzi G. Workload Characterization: A Survey.	
		Proceedings of IEEE, 81(8), Aug 1993.	
	1	Chandra, A. K., Hirschberg, D. S., and Wong, C. K. <i>Approximate</i>	
		Algorithms For Some Generalized Knapsack Problems, Theoretical	
		Computer. Science. 3, 293-304, 1976.	
	J	Chatziantoniou D. and Ross, K. A. Groupwise Processing of Relational	
		Queries. Proceedings of VLDB 1997.	
	К	Chaudhuri S., Das G., Datar M., Motwani R., and Narasayya V.	
		Overcoming Limitations of Sampling for Aggregation Queries.	
		Proceedings of ICDE 2001.	
	L	Chaudhuri S., Das G., and Narasayya V. A Robust, Optimization-	
		Based Approach for Approximate Answering of Aggregate Queries.	
		Proceedings of ACM SIGMOD 2001.	
	М	Chaudhuri S., Gupta A, and Narasayya V. Compressing SQL	
		Workloads (Workload Compression). Proceedings of ACM SIGMOD	
		2002.	
	N	Chaudhuri S., Kaushik R., and Naughton J.F. On Relational Support for	
		XML Publishing: Beyond Sorting and Tagging. Proceedings of ACM	
		SIGMOD 2003.	
	0	Chaudhuri, S., and Narasayya, V. AutoAdmin "What-If" Index Analysis	
		Utility. Proceedings of S1GMOD 1998.	
	Р	Elnaffar S. A Methodology for Auto-Recognizing DBMS Workloads.	
		Proceedings of CASCON'02.	

Examiner	 Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Information Disclosure Statement—PTO/SB/08a&b

Matter No.: 308293.02

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that Issued the document, by the two-letter code (MPO StandardST.3). ⁴ For Japanese patent documents, the Indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under MPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Item (book, magazine, journal, serial, symposium, catalog, etc.)., date, page(s), volume-issue number(s), publisher, city and/or country where published.	T2
	Q	Elnaffar S., Martin P., and Horman R. Automatically Classifying	
		Database Workloads. In Proceedings of CIKM'02.	
	R	Fagin R. Combining fuzzy information from multiple systems.	
		Proceedings of ACM PODS 1996.	
	S	Fagin R. Fuzzy Queries in Multimedia Database Systems. Proceedings of ACM PODS 1998.	
	Т	Ganti V., Lee M.L., and Ramakrishnan R. ICICLES: Self-tuning Samples	
		for Approximate Query Answering. Proceedings of VLDB 2000.	
	U	Johnson, D.S. Approximation Algorithms for Combinatorial Problems,	
		Journal of Computer and System Sciences, 9 (1974), pp. 256—278.	
	٧	Legaria, C. G., and Joshi, M. M. Orthogonal Optimization of	
		Subqueries and Aggregation. Proceedings of SIGMOD 2001.	
·	W	Papadias D., Tao Y., Fu G., Seeger B.: An Optimal and Progressive	
		Algorithm for Skyline Queries. Proceedings of ACM SIGMOD 2003.	
	Х	Srinivasan, A. Improved Approximations of Packing and Covering	
		Problems, Proc. 27th Ann. ACM Symposium. on Theory of Comp., pp	
		268-276, 1995.	
	Y	Stillger M., Lohman C., and Markl V. LEO—DB2's LEarning Optimizer.	
		In Proceedings of VLDB 2001.	
	z	Tan K., Eng P., Ooi B.C.: Efficient Progressive Skyline Computation.	
		Proceedings of VLDB 2001.	
	AA	Valentin, G., Zuliani, M., Zilio, D., and Lohman, G. DB2 Advisor: An	
		Optimizer Smart Enough to Recommend Its Own Indexes.	
		Proceedings of ICDE 2000.	
	ВВ	Yu P., Chen M., Heiss H., and Lee S. On Workload Characterization of	
		Relational Database Environments. IEEE Transactions on Software	
		Engineering, Vol 18, No. 4, April '92.	
	cc	ILOG CPLEX: World's Leading Mathematical Programming Optimizers,	
		http://www.ilog.com/products/cplex	

Examiner	Date	
Signature	Considered	·

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this formwith next communication to applicant.

Information Disclosure Statement—PTO/SB/08a&b

Matter No.: 308293.02

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (MPO StandardST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under MPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.)., date, page(s), volume-issue number(s), publisher, city and/or country where published.	Ĺ5			
	DD	Lovasz L. On the Ratio of Optimal Integral and Fractional Covers. Discrete Mathematics, 13(1975), pp. 383-390.				

Examiner	Date	 	
Signature	Considered		

Information Disclosure Statement—PTO/SB/08a&b

Matter No.: 308293.02

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (MPO StandardST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under MPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.